Amendments to the Specification

Please replace paragraph [0035] with the following amended paragraph:

[0035] The arrangement of the visual inspection 15, cover installation 13 and banding 6 workstation, along a common and shared conveyor 1 provide a logical order in a sequence of operations necessary in concluding the packaging of a product before it is shipped to a customer. No one operation can be omitted. ~~It also~~ It is also possible to extend the distance between workstations, while using a common and shared conveyor, to accommodate for available space within a facility or for closer proximity to other workstations in the manufacturing process of the product. It is also further possible to separate one or more ~~workstation~~ workstations from the common and shared conveyor and employ some other form of conveyance device to move the product from workstation to workstation where distance prohibits close proximity of workstations.

Please replace paragraph [0037] with the following amended paragraph:

[0037] Referring to FIG. 3 is a cross section illustration, as identified in FIG. 1 by B, of the cover applicator workstation. The cover applicator serves to attach protective covers to the sides, ends and upper surface of a rectangular box like shaped product. There are many forms and configurations of covers the cover applicator is adapted to installing and attaching to products. A product entering into the cover applicator workstation is detected by sensor 37, which serves to determine its length, and initiates a signal to an electrical mechanical device to provide a hard stop to the product and therein precisely position the product within the workstation. A powered shuttle like transport 27 using several opposing sets of rollers on at least two interlocking tracks 25 is moved over a precise path 39 by power source 26. Integral to the transport 27 is an assembly of one or more sets of at least two telescoping sleeves 28 in combination and coaxial arrangement. The outer sleeve being generally fixed to the transport 27 and the inner sleeve 28 being allowed to move up and down along path 38. Further, that a combination of bushings and/or bearing devices 34 are used to maintain precise alignment between outer sleeve and inner sleeve during longitudinal travel of the inner sleeve within the outer sleeve. Raising and lowering of the inner sleeve, along path 38, may be performed by a

combination of various types of motors and actuating devices suited for precise movement and control of the cover holder 29. To retrieve a new cover the inner sleeve is raised up and the cover holder 29 is pivoted up 90 degrees from its normal position by actuator 33. The transport 27 is moved, over path 39, to a stack of covers 31. The inner sleeve is lowered to allow the cover holder 29 to make contact with upper most cover. Vacuum is applied to a series of cup like devices for grasping the cover. The transport 27 then moves towards the product and the cover holder 29, while holding a cover, is lowered to its normal position by actuator 33. Height information of the product obtained by sensor 35 is used by a controller to precisely align the cover 31 with the product cover attachment surface. A pressure roller 36 first engages the product upper surface so as to provide sufficient pressure to serve to detect the movement and location of the ~~product has~~ product as it enters and leaves the workstation.

Please replace paragraph [0040] with the following amended paragraph:

[0040] Referring to FIG. 3 is a cross section illustration, as identified in FIG. 1 by B, of the cover applicator workstation. The cover applicator serves to attach protective covers to the sides, ends and upper surface of a rectangular box like shaped product. There are many forms and configurations of covers the cover applicator is adapted to installing and attaching to products. A product entering into the cover applicator workstation is detected by sensor 37, which serves to determine its length, and initiates a signal to an electrical mechanical device to provide a hard stop to the product and therein precisely position the product within the workstation. A powered shuttle like transport 27 using several opposing sets of rollers on at least two interlocking tracks 25 is moved over a precise path 39 by power source 26. Integral to the transport 27 is an assembly of one or more sets of at least two telescoping sleeves 28 in combination and coaxial arrangement. The outer sleeve being generally fixed to the transport 27 and the inner sleeve 28 being allowed to move up and down along path 38. Further, that a combination of bushings and/or bearing devices 34 are used to maintain precise alignment between outer sleeve and inner sleeve during longitudinal travel of the inner sleeve within the outer sleeve. Raising and lowering of the inner sleeve, along path 38, may be performed by a combination of various types of motors and actuating devices suited for precise movement and control of the cover holder 29. To retrieve a new cover the inner sleeve is raised up and the

cover holder 29 is pivoted up 90 degrees from its normal position by actuator 33. The transport 27 is moved, over path 39, to a stack of covers 31. The inner sleeve is lowered to allow the cover holder 29 to make contact with upper most cover. Vacuum is applied to a series of cup like devices for grasping the cover. The transport 27 then moves towards the product and the cover holder 29, while holding a cover, is lowered to its normal position by actuator 33. Height information of the product obtained by sensor 35 is used by a controller to precisely align the cover 31 with the product cover attachment surface. A pressure roller 36 first engages the product upper surface so as to provide sufficient pressure to restrain ~~movement if~~ movement of the product. The transport 27 moves forward to compress the cover against the product surface. Where the protective cover configuration consists of multiple ~~panel-like~~ panel-like flaps, extending from the primary cover, the cover holder 29 will manipulate a series of power driven plates to fold the additional flaps over and onto the upper and end adjacent surfaces. The cover 31 is then attached to product surfaces by means designated by the cover manufacturer and which could comprise mechanical fasteners such as, nails, stapling, adhesive, gluing and Velcro fasteners to name a few examples. The cover 31 stack is maintained at a constant height by an automated powered device 32 and provides an alarm when feed height falls below designated level. The cover stack is further aligned so as to place all cover edges parallel to one another through means of an automated alignment fixture 30.

Please replace paragraph [0041] with the following amended paragraph:

[0041] Referring to FIG. 4 is a rear view of the cover holder. The function of the cover holder is to retrieve, grasp and apply a new protective cover to products having a rectangular box like shape. It is further capable of folding over ~~panel-like~~ panel-like flaps extending from the primary cover so as to place them generally parallel to adjacent surfaces of the box like product shape. ~~Once folded down~~ Once folded down, the entire cover will be securely attached to the product by means of stapling, gluing or Velcro fastening. Cover holding plate 44 (backside shown) attaches to the cover installer transport ~~(FIG.1)~~ (FIG. 1) and is comprised of actuators 42, 50, 53 and vacuum operated cover grippers 51. Plates 41, 47 and 54 are attached to holding plate 44 through hinges 52, 48 and 49. Actuators 42, 50 and 53 serve to retract and hold ~~plates 41,47~~ plates 41, 47 and 54 in the open position during the retrieval and transporting

of a new protective cover to the product surface. The actual securing of the cover to the holding plate 44 is provided by means of several vacuum operated grippers 51 precisely placed and secured to the cover plate 44. The vacuum grippers 51 are feed through devices that protrude on the reverse surface of the cover holding plate 44. Another configuration is a flat shallow rectangular shaped chamber, exhibiting a large number of precisely spaced holes on one surface only and when vacuum is applied serve as the cover gripper. In this configuration the chamber is integrated into the construction of the cover holding plate 44. Also precisely placed on plates 41, 47 and 54 are several powered staplers 40, 43 when stapling is a required means of cover attachment. Additional provisions for folding tabs, present in certain types of covers, are smaller plates 45 and 56 hinged 46 to plates 47 and 54. These plates are also operated by actuators 55 to fold cover tabs down and may comprise a powered stapler 40 when this is the required method attachment.

Please replace paragraph [0043] with the following amended paragraph:

[0043] Referring to FIG. 6 is a cross section illustration, as identified in FIG. 1 by B, of another cover applicator workstation designed for installing a different form of cover. The cover applicator also serves to attach preformed covers to the sides, ends and upper surface of a rectangular box like shaped product. There are many forms and configurations of covers the cover applicator is adapted to installing and attaching to products. A product entering into the cover applicator workstation is detected by sensor 84, which serves to determine its length, and initiates a signal to an electrical mechanical device to provide a hard stop to the product and therein precisely position the product within the workstation. A powered shuttle like transport 69 using opposing sets of rollers on two interlocking tracks 68 is moved over a precise path 72 by power source 67. Integral to the transport 69 is an assembly of one or more sets of at least two telescoping sleeves 70 in coaxial arrangement. A powered drive 71 is used to rotate telescoping sleeves 70 about their coaxial center to provide an additional means for aligning cover holder 79 with product 82 surface. The outer sleeve being generally fixed to the transport 69 and the inner sleeve being allowed to move up and down along direction 73. Further that a combination of bushings and/or bearing devices is used to maintain precise alignment between outer sleeve and inner sleeve during longitudinal travel of the inner sleeve

within the outer sleeve. Raising and lowering inner sleeve 70, along direction 73, may be performed by a combination of motors and actuators. To retrieve a cover the inner sleeve is adjusted to a predetermined position and the cover holder 80, in its normal position, is rotated 90 degrees by actuator 81. The transport 69 is moved over a precise path 72 towards a vertically positioned source of covers 76. The inner sleeve may be further adjusted to accommodate variations in cover dimensions before cover holder 79 makes contact with the first cover. Vacuum is applied to a series of cup like devices for grasping the cover or means, which use vacuum means for gripping a surface. The transport 69 then moves towards the product and during this period the inner sleeve 70 is rotated 180 degrees so as to position the cover holder 79, while holding the cover, now facing the product surface to be covered. Product height information, obtained by sensor 83, is used by a controller to precisely align the cover with the product cover surface. A pressure roller, such as described in FIG.3, may be used to engage the product upper surface so as to provide sufficient pressure to restrain movement if the product is comprised of loose unbound sheet articles. The transport 69 moves forward to compress the cover holder 79 and cover against the product 82 surfaces. Where the cover configuration consists of multiple ~~panel-like~~ panel-like flaps, extending from the primary cover, the cover holder 79 will manipulate a series of power driven or fixed plates to fold the additional flaps over and onto the upper and end adjacent surfaces. The cover is then attached to product surfaces by means designated by the cover manufacturer and which could comprise stapling, adhesive, gluing and Velcro fasteners. Cover stack alignment and feeder 78 are automated to the extent that a single cover 76 is always made present in a loading tray. The cover stack is further aligned so as to place all cover edges parallel to one another through means of powered alignment plates located within feeder 78. Actuator 75 operates cover control plates 74 in manner so as to allow the removal of a single cover 76 while simultaneously controlling the forward movement of covers. The forward movement of covers in the cover feeder 78 is performed by means of a device 77, which places a constant preload pressure on the cover stack.

Please replace paragraph [0047] with the following amended paragraph:

[0047] Referring to 10 is a block diagram showing the various components and controls employed for the operation of this invention. Product leading and ~~training~~ trailing edge sensors 117 is employed to detect the entry and egress of a product into a workstation. They provide such information necessary to control the actuation of other devices, the speed and stopping of the product through the workstation. Product height sensors 118 serve to measure the height of the product above the conveyor plane of reference. This information serves to provide information to the controller, which may adjust the position of other devices intended to contact and engage the product. The X Y positioning sensors 119 provide information as to the actual location of the table and product relative to the cover installer. The information will confirm that the product is properly aligned or that there may be a fault present in the alignment. In such a condition the cover installer is inhibited from its operating mode. Conveyor speed sensors 120 serve to provide accurate information on the performance the material handling system. Safety and Alarm sensors 121 serve to detect failures in device and system operation, which may be hazardous to continued system operation or operating personnel. Protective cover applicator X Y position sensors 122 are those sensors employed to detect and measure the precise location of cover installer relative the product to be covered. They operate within a closed loop feedback system to provide information for proportional control of servos, actuators and motors necessary for precise engagement of the cover to the product surface geometry. Conveyor stop sensors 123 serve to initiate power shut down in event of component or system failure. End of line sensor 124 serve to alert that a product has completed the process and is now ready for removal. The product inspection camera stations 128 serve to illuminate by means of camera station lighting 127 and take high resolution real time video images of all designated surfaces of the product through cameras 129 before it is covered. The visual images are presented to the system operator on a monitor 132 for remote viewing and examination of the product condition. The image information is also transmitted to a computer 130 where the image file is compressed into an acceptable format and then placed into CD ROM archiving. Manual control and operation of the system is provided through control panel 125. The operator has the option of manually controlling each interdependent operation performed in each of three workstations. The operator also has the option of selectively and fully

automating workstations through controller 126. This allows the means for dealing with varying product configurations entering the system. This is also an important feature and capability when the system employs five cover installing assemblies and product configurations vary. In a fully automated operation of the system a central controller 126 uses the data provided by all sensors and operator requirements to manage and operate the inspection workstation components 128, Cover applicator workstation 133 and Banding workstation 135. When a product has been fully processed, information stored in the central controller on that product is transmitted to inspection tag printer 131 where a tag or label is produced. The printed tag or label is then attached to the product by means of an automated inspection tag applicator 134. Monitor 132 is primarily used by the system operator to remotely view the surfaces of the product for the presence of damage. Multiple real time digital imaging devices such as still cameras, line scan and continuous motion video cameras are used in various arrangements in order to inspect a wide variety of surfaces, which are possible in products. The inspection images are presented on the monitor 132 in an operator controlled sequence or possibly on several monitors, one for each surface under inspection. In a more advanced version an arrangement of computer software, sensors and imaging devices can be programmed and used to detect damaged surfaces and initiate alarms and system controls to halt the process and alert the operator.

Please replace paragraph [0053] with the following amended paragraph:

[0053] Referring to FIG. 13, the magazine 210 includes a plurality of protective covers 212 resting upon a moveable pallet mechanism 216. The covers are positioned by the pallet mechanism 216 until they are in proper position and alignment to be grasped by the cover manipulator 232. The covers must be kept at a predetermined height in order for proper operation and the height is automatically maintained by a scissor mechanism 262 operated by a ~~pneumatic~~ hydraulic piston and cylinder 264. This insures that the top cover of the stack 212 lies in a plane parallel to the plane formed by the suction cups 248 of the cover manipulator 232. The structure formed by the three slats 242a, 242b, 242c along with the vacuum suction cups 248 comprises a cover gripper which is rotatable between a position atop the stack of protective covers (refer to FIG. 14) through a 270 degree arc to a position flush against the side

or end of the product 222 (refer to FIG. 15). The product stack, which may be any type of product but is generally one which is in a box-like configuration and which may consist of a stack of substantially flat material such as sheets of plywood, fiberboard or other composite materials, is conveyed along the tracks 228a, 228b to a position adjacent the cover applicator apparatus. Its leading edge is held in place by stops 266a and 266b which are under the control of pneumatic actuator 268. A turntable mechanism 270 pushes upwardly to lift the product stack 222 and rotate it 180 degrees (refer to FIG. 18). The particular form of the turntable mechanism is unimportant and may be pneumatic or may be operated by a screw jack and worm gear or the like. When rotation is completed, the turntable adjusts its height so that the top of the product stack 222 bears against a stop member 272 which sends a signal to the control system that the stack is at the proper height and stops the vertical movement of the turntable 270.